AMENDMENT OF SOLICITATION / MODIFICATION OF CONTRACT

1. Contract Number	Page of Pages	
	1	9

2. Amendment/Modification Number	3. Effective Date	4. Requisition/Purchase	5. Solicitation Caption : Petworth Library Exterior Restoration
Amend No.2	See item 16C		

6. Issued by: Code

D.C. Public Library
Office Of Procurement
901 G Street, N.W. Suite 401
Washington, DC 20001

7. Administered By: (If other than line 6)
D.C. Public Library
Office Of Procurement
901 G Street, N.W. Suite 401
Washington, DC 20001

8. Name and Address of Contractor (No. street, city, county, state and zip code number)

Code Facility

9A. Amendment of Solicitation No. DCPL-2009-I-0003

9B. Dated (See Item 11)

10A. Modification of Contract/Order No.

10B. Dated (See Item 13)

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers ☒ is extended. ☐ is not extended. Offerors must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) completing Items 8 and 15, and returning ___1_____ copies of the amendment; (b) acknowledging receipt of this amendment on each copy of the offer submitted; or (c) separate letter or fax which includes a reference to the solicitation and amendment number. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter, telegram or fax, provided each letter or telegram makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. Accounting and Appropriation Data (If Required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

	A. This change order is issued pursuant to (Specify Authority): The changes set forth in Item 14 are made in the Contract/Order No. in Item 10A.
	B. The above numbered Contract/Order is modified to reflect the administrative changes (such as, changes in paying office, appropriation data, etc.) set forth in Item 14, pursuant to the authority of 27 DCMR, Chapter 36, Section 3601.2.
	C. This supplemental agreement is entered into pursuant to authority of:
	D. Other (Specify type of modification and authority)

E. **IMPORTANT:** Contractor ☐ is not ☒ is required to sign this document and return __1__ copies to the issuing office.

14. Description of Amendment/Modification (Organized by UCF Section headings, including solicitation/contract subject matter where feasible.)

The solicitation is amended as follows:

1. Delete Proposal submission date and time Wednesday, November 19, 2008 at 2:00 p.m. and in its entirety and substitute Friday, November 21, 2008 at 2:00 p.m.

2. Delete Price Breakdown Form (Page 4) and substitute Attachment J.19 (Revised Price Breakdown Form).

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A remain unchanged and in full force and effect.

15A. Name and Title of Signer (Type or print)		16A. Name of Contracting Officer Wayne R. Minor	
15B. Name of Contractor (Signature of person authorized to sign)	15C. Date Signed	16B. District of Columbia (Signature of Contracting Officer)	16C. Date Signed 11-17-08

Section L, Instructions, Conditions and Notices to Bidders,
Paragraph 11, Questions About the Solicitation:

The following questions were submitted in writing to DCPL regarding the subject solicitation. The answers are provided by DCPL, however these answers do not change the terms and conditions of the solicitation except where modified by amendment. No further questions will be entertained after issuance of this amendment.

Questions and Answers:

1. **Question:** Sheet L1.1 states signage to be confirmed with COTR. Please provide detail for signage or an allowance.

   Answer: See Attachment J.10.

2. **Question:** Drawings indicate 2 new flagpoles, please provide details for flagpole (size)?

   Answer: See Attachment J.11.

3. **Question:** Plumbing drawings for installation of Drinking Fountain is indicated as an additional item under Dwg. A1.4, Spec. Section 02870, Site Furnishings. Narh Mech. Has informed me that they have already provided plumbing on site for this feature. Is this correct? If so, will GC be installing drinking fountain? Please provide manufacturer for drinking fountain to be installed?

   Answer: No drinking fountain will be installed as part of this project.

4. **Question:** Reference dwgs. A2.4 & A3.3, Note 14, repair wood cornice in the west corner at the roof. It was observed during the site visit, of extreme pealing of the paint around the entire cornice. Other than Note 14, the scope of work **does not** require this condition around the entire cornice to be abated, removed and repainted. Please clarify.

   Answer: The intent is to repair or replace the rotted section of the cornice on the West side corner. The remaining cornice should be scraped of any loose paint and re-painted according to the specifications. There is no need to completely strip the entire cornice.

5. **Question:** Reference detail 10, dwg. L4.3, Flagpole. Please provide your complete specifications for the flagpole and accessories.

   Answer: See Answer # 2.

6. **Question:** Reference detail 4, dwg. L4.1, Permeable Paving Detail. This detail is illegible (can't read notes), please reissue a clear copy.

   Answer: See Attachment J.12.

7. **Question:** Reference dwg. L1.1, New Signs (2ea). Please provide specifications & details.

   Answer: See Answer # 1.

8. **Question:** Reference dwg. A3.1 & A3.2, Dormer Windows. Refer to New Construction Note #7 "new top sash of dormer window w/ open panes. Glazing at a later date". What is the intent to leave the top sash open, for how long, is temporary protection required for the open panes by this contract? Please clarify

   Answer: The new un-glazed sashes will be installed in front of existing fresh-air intakes. The reason for leaving them un-glazed is to allow air to get to the intakes while restoring the appearance of a normal window sash at those locations. During a subsequent project (not this project) those intakes will be relocated and the sashes will be glazed.

9. **Question:** Reference dwg. A3.2, Lower Level. Demo Note #7 & 8 do not appear to apply to windows #006 & #004 as indicated. Please advise correct reference note and scope of work for these two windows.

   Answer: For correct reference notes and scope of work for windows # 004 and # 006, See remarks on Window Restoration Schedule sht. A5.1.

10. **Question:** Reference detail 9, dwg. L4.4, Rain Garden. Note cross references to civil dwg. 007 (does not exist). Please advise the extent (area) and location of the Rain Garden and the depth of the "Rain Garden soil mix" (not shown on the landscape plan L2.1).

    Answer: Rain garden detail to be applied at rain leader points of discharge. Rain garden soil mix as per fact sheet from Environmental Protection Agency that references (under design criteria) the guide developed by PG County.

11. **Question:** Sheet A1.1, Section 4900 Part2, 2.1G States the mortar will be a type "O" mortar. Is this correct? Typically type "O" is use for interior (low strength). Typically type "N" would be used in this application. For your information.

    Answer: Use Type "N" Mortar. (See Attachment J.13, document "mortar analysis petworth.pdf")

12. **Question:** Sheet A3.1 states to refer to mortar analysis. I could not find a mortar analysis in the specs or drawings. (other than what is stated in section 4900 Part 2, 2.1G)

    Answer: See Attachment J.13.

13. **Question:** New work note states to repoint stairs 100%, however, no drawing depicts this work item. (New work notes # 22 &26)

    Answer: See detail #2 on drawing A2.2. New Work Note #26 points to areas on the drawing where this work is necessary.

14. **Question:** On Drawing A1.4 Section 02870-Site Furnishing part 11.3,11.4,11.5 states install site furnishing indicated on the drawings. Going through the drawings we are able to find the quantity and the location of the site furnishings. Please provide the quantity and location of these items.

    Answer: See Drawings L1.1-3 and L4.3.

15. **Question:** On drawing A5.1 in General Notes H states remove all existing pull down shades and replace with MECHO-SHADES. We need detailed Specs. on what MECHO-SHADES to use for this project and any alterative manufactures. Please advise.

    Answer: Use Mecho/ 5 Standard with fascia. (See Attachment J.14).

16. Question: Drawing L1.1 is called for New Sign, Confirm detail with C.O.T.R, please provide the detail specification, drawings and list of manufacturer.

Answer: See Answer #1.

17. Question: Drawing L1.1 is called for New Flagpole, See Detail 10, Sheet L4.3. Please provide the height of the new flagpole, detail specification and list of manufacturer.

Answer: See Answer #2.

18. Question: Drawing L2.1 (Planting Plan) is called for TIA, RUD and ECH perennials but no details given in Drawing L2.2 (Plant Schedule). Please provide the details for TIA, RUD and ECH perennials.

Answer: See updated documents "L2.1Planting plan.pdf" (See Attachment J.15) and "L2.2 Plant List.pdf" (See Attachment J.16). Plant details are shown on L4.4.

19. Question: Quantity for VA Shrubs (Viburnum Acerifolium) varies in Drawing L2.1 (Planting Plan) and Drawing L2.2 (Plant Schedule). In Drawing L2.1 is called for 22 ea and in drawing L2.2 is called for 0. Please clarify which quantity we need to use in our base bid.

Answer: See Attachments J.15 and Attachment J.16.

20. Question: Quantity for shrubs and perennials are missing at right hand side New Sign in Drawing L2.1 (Planting Plan). Please provide the details of shrubs and perennials for the same.

Answer: See Attachment J.15.

21. Question: Drawing 6/L4.1, 7/L4.1, 1/L4.2 and 2/L4.2 is not to scale drawing and not given detail dimension. Please provide the scale drawings or details dimensions of drawing 6/L4.1, 7/L4.1, 1/L4.2 and 2/L4.2.

Answer: See Answer # 19.

22. Question: It is difficult to read the drawing 4/L4.1 and not given any detail dimensions. Please provide The readable drawing and detail dimensions.

Answer: See Answer #6.

23. Question: We are unable to find section detail and specification for Resurface Asphalt Parking Lot. Please provide the section detail and specification for the same.

Answer: Existing asphalt to be milled to depth of 110mm and resurfaced with new asphalt.

24. Question: Please confirm metal finish, glass selection and height including chain [for the Type D light fixture indicated in the fixture schedule].

Answer:

Finish:	Oiled bronze
Glass color:	LS- light seedy
Height including chain:	2'-9"

25. Question: "Location & new sign for hours of operation in side panels to be approved by COTR. See A4.1" is shown on drawing A3.1. Please provide specification and details for the same.

Answer: Sign will be mounted on door – not side panels. Sign to be clear lexan 1'-7" x 1'-7" x 7/16", bolted to door with stainless steel bolts and rubber gaskets. COTR approved Text to be screen printed onto glass sign.

26. Question: In drawing A2.1 General New Work Notes: "F. It is assumed that lead paint is present in all painted surfaces. Hazamat permit to be acquired prior to any paint removal." Please provide the location of lead paint.

Answer: The contractor shall assume that lead paint is present on all painted surfaces. DCPL will not provide a list of specific locations.

27. Question: Please provide specifications section for flag pole, Petworth signs, glass sign and cupola.

Answer: See Answer # 2; Answer #7 and Answer # 25. Cupola to be custom built per Drawing A7.1

28. Question: Please provide description, manufacturer etc. for hanging lantern at the cupola.

Answer: See Drawing E-5 light fixture schedule, and Answer # 24.

29. Question: Please provide more details for Permeable Paving. The detail given on L4.1 is not clear.

Answer: See Answer #6.

30. Question: Is there any alternate items in the bid form? Specification calls for a perticluar brand paint as an add alternate.

Answer: Within Specification Section 09910, Part 2, delete item #2.1 and replace with 2.1 Paint system for wood,

A. Primer: "Hollandlac primer undercoat" by Fine Paints of Europe.
1. Finish coat: "Hollandlac Brilliant" by Fine Paints of Europe.
Two coats. Custom Color to be selected by COTR.

Brand Name_____ or
Equal _____

31. Question: Provide specifications for 1) Flag poles, 2) Bicycle Racks and 3) Trash Bins

Answer: See Answer # 2 for flag poles. See sht L4.3 details 8/L4.3 and 7/L4.3

32. Question: During window restoration do you expect entire window including frame to be removed?

Answer: We anticipate that the window sashes will be removed for restoration. The frames can be restored in place.

33. Question: Certain window require minor restoration i.e. hardware replacement, glazing etc. for this type of work do we have to remove window sashes and take them off site?

Answer: DCPL anticipates that the window sash restoration will take place off-site.

34. Question: Pickt rail at ramp calls for each pisket to be set in lime stone. This will make it very difficult to set in field. can we have bottom rail for pickets and set only posts in lime stone?

Answer: Pickets are to be set in Lime stone. New railing is to match what is existing.

35. Question: On Demo drawing C1.1 it calls for part of existing sidewalk to remain (Infront of building) but on drawing L1.1 it calls for new sidewalk.

Answer: Sidewalk to be new concrete paving per Attachment J.18.

36. Question: General demo. note # 11 calls for possible reuse of existing pickrail at front steps and ramp but on deatils on drawing A4.1 calls for new rail.

Answer: Rails and pickets are to be new to match existing per Drawing A4.1

37. Question: Please provide dimensions for reading room seatwall foundation. DWG L4.1

Answer: See detail 1/L4.2 for detail plan at seat wall.

38. Question: Detail 4/L4.1 is not legible. Site drawing does not call for drain pipe and curb along permeable paving.

Answer: See Answer # 6. Provide drain pipe and concrete curb per revised Det. 4/L4.1 See Attachment J.12.

39. Question: Are we suppose to strip existing paint from wood cornice and soffit? Is it to be treated as a lead paint?

Answer: See Answer #4 & Answer #26.

40. Question: Provide details for permanent building signs if one is required to be installed.

Answer: See Answer #1.

41. Question: Reference Keynote 19, dwg. A6.1, Lockset Mul-T-Lock. Does this note apply to this project? Note 19 is not referenced on the Door & Frame Schedule.

Answer: Yes, Mul-T-Lock Interactive Cliq cylinders and Deadbolts are to be applied to exterior doors and coordinated to work with DCPL's existing Interactive Cliq System.

42. Question: Reference Elevation 4/A3.3, overhead door #001. The drawings do not show the **existing** fence located directly in front on the sectional door. Does the fence remain or is it to be removed?

Answer: Fence in front of door 001 is to be removed.

43. Question: Detail 1/L1.1, Site Plan does not adequately dimension the length/geometry of the outdoor reading room brick seat wall; cross-referencing against Detail 1/L4.2, Reading Room Seat Wall Detail does not alleviate this problem

Answer: See revised ¼"=1'-0" scale det. 1/L4.2. See Attachment J.17.

44. Question: Detail 6/L4.1, Pillar Detailed does not adequately dimension the structural concrete footing size;

Answer: See Attachment details in Attachment J.12.

45. Question: Detail 7/L4.1 Reading Room Seat Wall Detail does not adequately dimension the structural concrete footing size; or the architectural Precast concrete coping size;

Answer: See Attachment Detail 7 in Attachment J.12.

46. Question: Detail A/S-1, Concrete Wall Section: Is this detail similar for the NW face of ramp?

Answer: Yes, this detail applies to the entire ramp.

47. Question: Detail A/S-1, Concrete Wall Section: What is the detail for the NW face of ramp that abuts the face of the existing building?

Answer: Similar to Detail A/S-1.

48. Question: Spec section 02870 Site Furnishings talk about a trash can, bicycle rack and benches being located on the drawings. None of the drawings show the locations, and hence quantity, of any of these items. Please advise.

Answer: See Attachment J.18.

49. Question: Plan calls to mill parking lot but does not specify whta thickness to be milled?

Answer: Asphalt to be milled to depth of 110mm.

50. Question: Is entrace to parking lot from sterrt going o be asphalt or concrete? If concrete will it stops at property line and what will be thickness of apron?

Answer: From street to parking lot will be concrete. 4" thick Concrete apron will start at sidewalk.

51. Question: Please note that detail 4/L4.1 and specification # 02780 for brick pavers, "Mortar setting" conflicts with each other. Does paver have permeable base or mortar base?

Answer: Pavers are to have permeable base.

52. Question: Are window shades part of the contract. On the drawing there is a note for shades to be by "MACHO" but does not specify location. Please provide list of windows for new shades. Also provide count for site furniture by type i.e. trash bins, bench and bicycle racks. Provide specification and detail/drawings for building sign and glass sign at main entrance.

Answer: All first and second floor windows are to have Mecho-shades.
Brand Name _____ or
Equal_____

See Attachment J.18 for site furniture quantities and locations.

53. Question: Price break down sheet does not reflect actual scope of work. There is no room for Div. # 2 which oncludes earthwork, site concrete, asphalt paving, landscaping etc. It does not have Div. # 4 Restoration is major part of the work. It does not have Div # 6 which is also major part of work. It had Div. # 15 and there is no HVAC work called for in t he scope of work.

Answer: See revised attached Price Breakdown Form. Only use those divisions that are necessary according to the specifications and drawings, however.

54. Question: specified for the Steeple/Cupola. Is lightning protection required?

Answer: Yes, lightning protection is required.

55. Question: Drawing A1.1 Section 01100 – Summary 1.1A note no. #5 "Repainting of entire exterior, including brick, windows and doors and trim." There is no details given for repainting of brick in painting specification or any other drawings. Please clarify is it require to paint entire exterior brick, if yes please provide the detail specification for the same.

Answer: Brick will not be painted.

56. Question: Drawing A2.2 New work note #23. "New hot dipped galvanized & powder coated black bar grated, to withstand moderate foot traffic." Please provide detail specification for this item.

Answer: Bar grating to be welded bar - (19-W-4) 1-3/16" x 4" bar spacing.

57. Question: Drawing A3.3 demolition work note #20. "Remove existing metal casing. Contractor to verify unknown contents to determine further course of action.", Please provide more details like which kind of test do we need to include in our cost proposal. If any test found positive is that going to be a change order or not? Please clarify.

Answer: The selected contractor shall verify whether the contents of the metal casing are necessary. If equipment is not necessary, it should be demolished. If it is necessary to remain, cover shall be cleaned repaired and repainted according to specification Section 09910, Part 2.2.2 "Paint System for metal.

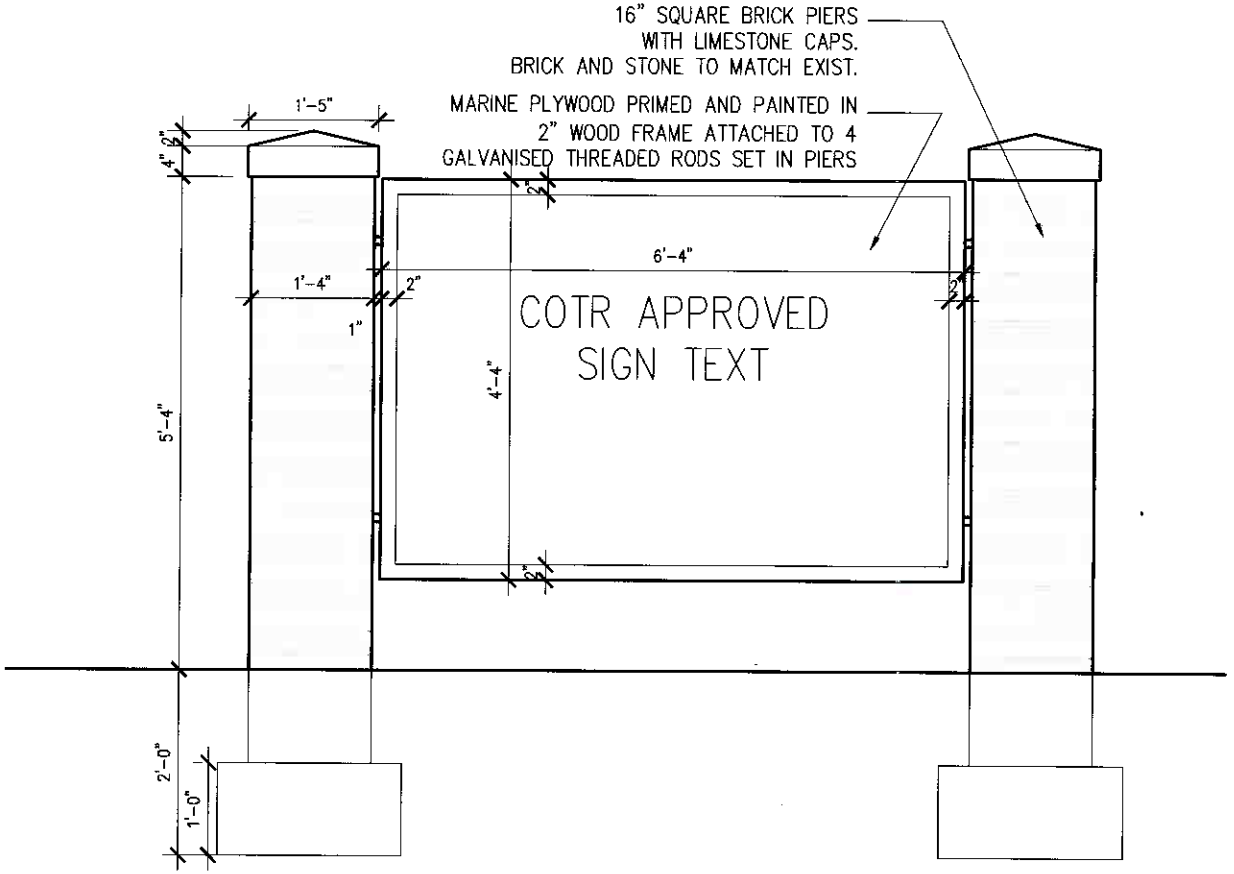
58. Question: Drawing A6.1 Door and frame restoration schedule called for 001 and 002 type A New wood sectional garage door but no hardware, cross sectional details or any other details given for these new wood sectional garage door. We took some photos of west elevation and the existing door does not match with new wood sectional garage door. Please provide hardware, cross sectional details or any other details for New wood sectional garage door.

Answer: The new "Type A" (garage) doors are to be paint-grade wood with laminated safety glass in the top panels as shown on sheet A 6.1. These doors shall be Clopay Building Products Company Reserve Collection and required associated hardware or other manufacturer of equal quality.

59. Question: Drawing A2.2 called for "Automatic door operator bollard" Please provide elevation and cross section details of this bollard.

Answer:

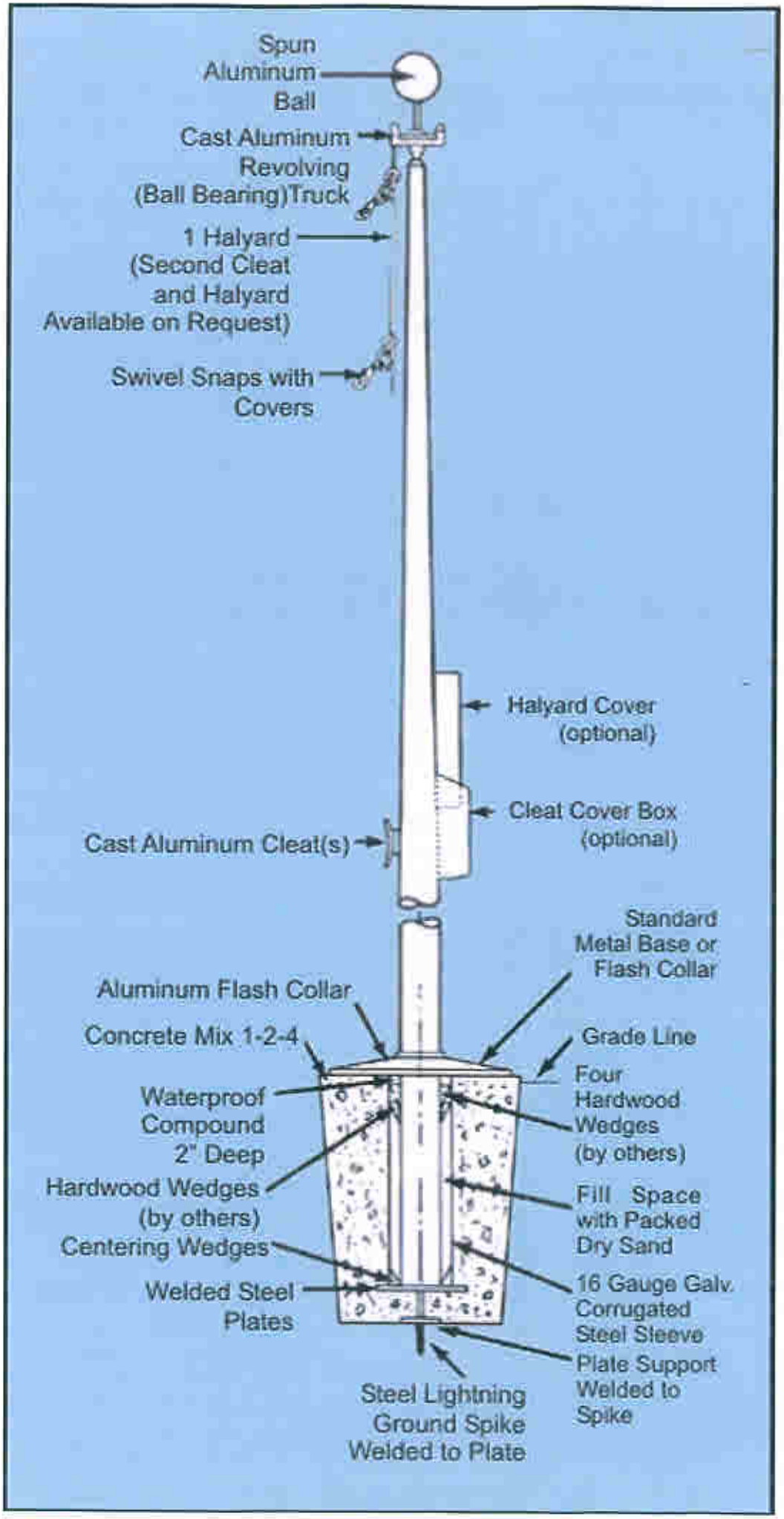
Dimensions (with cap attached):	41 ½"H x 6 ¼" W x 4 ¼"D
Material:	
• Post	Powder-Coated (Inside and Out) Carbon Steel
• Cap	UV-Resistant ABS Plastic
• Mounting Bracket	Stainless Steel
Pushplate Options:	4 ½" Round or 4 ¾" Square BEA Pushplates
Weight:	35 lbs (16 kilos)
Color:	Black,
Mounting Hardware:	L-anchor, Expansion Anchor, Split Washer and Nut



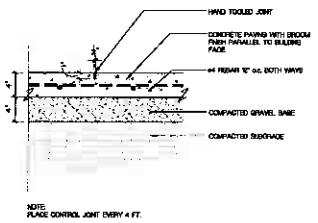
1 / ASK 1 **NEW SIGN**

1/2" = 1'-0"

Attachment J.10
Amendment No. 2
DCPL-2009-I-0003

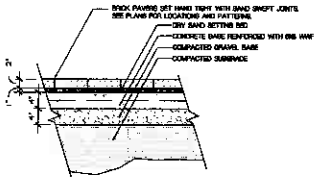


Attachment J.11
Amendment No. 2
DCPL-2009-I-0003

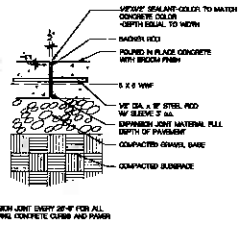


NOTE:
PLACE CONTROL JOINT EVERY 4 FT.

1 / L4.1 CONCRETE PAVING
NTS

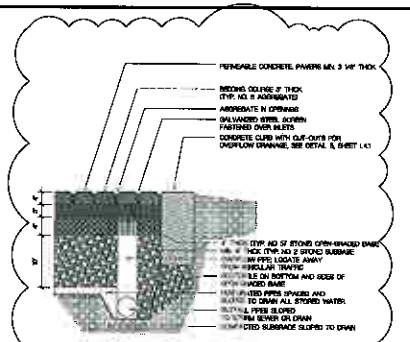


2 / L4.1 BRICK PAVING BAND
NTS



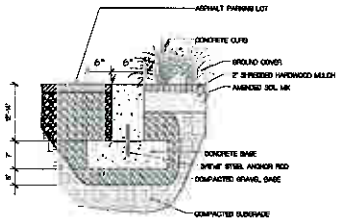
NOTE:
PLACE EXPANSION JOINT EVERY 20'-0" FOR ALL CONCRETE PAVING, CONCRETE CURBS AND PAVER SUB BASE/CE

3 / L4.1 EXPANSION JOINT DETAIL
NTS



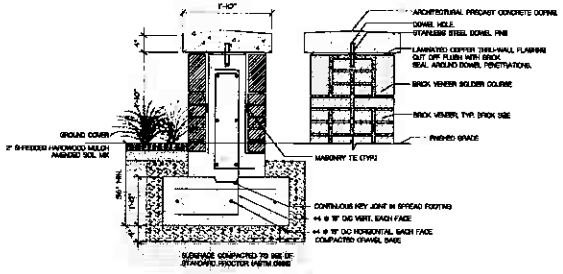
NOTE:
GEOTECHNICAL REPORT NEEDED IN ORDER TO DETERMINE GRAVEL DEPTH AND SOIL PERMEABILITY.

4 / L4.1 PERMEABLE PAVING DETAIL
NTS



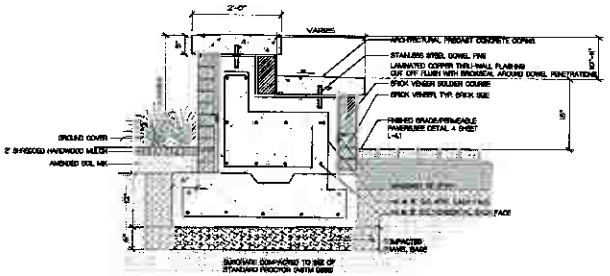
NOTE:
PLACE EXPANSION JOINT EVERY 20'-0" OC.

5 / L4.1 FLUSH CURB DETAIL
1"=1'-0"



NOTE:
FOOTING DETAIL SEE STRUCTURAL DWGS.

6 / L4.1 PILLAR DETAIL
1"=1'-0"



NOTE:
FOOTING TO BE DESIGNED BY STRUCTURAL ENGINEER

7 / L4.1 READING ROOM SEAT WALL DETAIL
1"=1'-0"

FRANCK & LOHSEN
ARCHITECTS

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Petworth Library
-
Restoration

4200 Kansas Avenue, NW
Washington, D.C.

- DRAWING TITLE -

HARDSCAPE DETAILS

- DATE -
November 10, 2008
- SCALE -
NOT TO SCALE
- SHEET NUMBER -
L4.1
- ISSUE -
BID SET

Attachment J.12
Amendment No. 2
DCPL-2009-I-0003

MORTAR ANALYSIS

for the

PETWORTH LIBRARY

WASHINGTON, D.C.

Prepared for

Franck & Lohsen Architects
1715 N Street, NW
Washington, D.C. 20036

Prepared by

Amanda Edwards
Architectural Conservator

JOHN MILNER ASSOCIATES, INC.
5250 Cherokee Avenue, Suite 300
Alexandria, Virginia 22312

May 2008

Attachment J.13
Amendment No. 2
DCPL-2009-I-0003

I. INTRODUCTION

This report is an analysis of mortar sampled from the Petworth Library in Northwest Washington D.C. John Milner Associates, Inc. extracted mortar samples from the site for analysis. Two representative samples were selected for analysis: a brick pointing mortar sample (MA01) and a limestone pointing mortar sample (MA02). The purpose of this analysis is to determine the physical composition of the mortars to inform the mix of a new mortar during the restoration of the building.

Mortar analysis is a visual and laboratory examination of cementitious building materials such as mortars, plasters, stuccos, and grouts for the purpose of determining composition and application techniques. The analysis is subjective, and primarily comparative in nature, and may be effectively used to assess the relationship between different parts of a structure or of a structure to similar sites elsewhere. The principal reason mortars are analyzed is to match historic mortars for repointing and reconstruction projects. It is critical that new mortars are physically compatible with adjacent materials and that the surface is aesthetically appropriate to the appearance of the significant historic period of the structure.

II. METHODOLOGY

Sampling

The mortar samples were extracted on April 29, 2008. The samples chosen for analysis are: -

MA01- Brick Pointing Mortar

MA02- Limestone Pointing Mortar from the top of the northeast corner.

Analysis: Mortar

A freshly broken surface of the mortar sample was examined with a stereo-binocular microscope. Binder color and characteristics, proportion and characteristics of voids, and relationship between aggregate and binder were evaluated. The binder was matched to a color standard of the Munsell Color Chart.[1] A portion of the sample was ground in a marble mortar to disaggregate the material. The remainder of the sample was set aside for later use in evaluation of potential replication mixes.

The sample was then separated into three components: the acid-soluble fraction, the 'fines' (e.g. pigment, acid-insoluble cement residue, or silt-to clay-sized mineral grains), and the aggregate or sand. Separation was accomplished by wet-chemical techniques. The acid-soluble fraction was first removed by digestion with diluted hydrochloric acid. The fines were separated from the aggregate by washing and filtration, then dried and weighed. The weight of acid soluble material was calculated by the difference in weight of the sample before processing and its weight after processing.

[1] The Munsell System of Color Notation identifies color in terms of three attributes: hue, value, and chroma. Color standards are opaque pigmented films on coated paper mounted on charts for each hue.

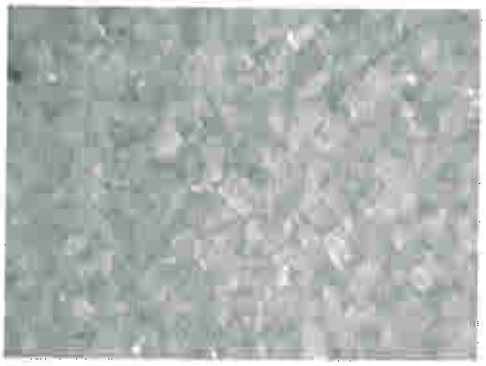
Weight percentages of acid-soluble material, fines, and aggregate in the sample were calculated as an aid for determining an appropriate replication mortar type. The aggregate was examined microscopically to identify the component materials, as well as evaluate the color, opacity, and shape of the sand grains, and the presence and nature of impurities. The particle size distribution of the aggregate was determined by sieve analysis.

III. FINDINGS

Observations: Mortar

The mortar samples analyzed represent two different mortar mixes, one for brick and one for limestone. Both samples are hard cement-based mortars mixed with aggregate that is similar in color but not in composition. The limestone mortar aggregate is very fine while the brick mortar aggregate has larger grains. The limestone pointing mortar was mixed with an approximate ratio of 1:1 binder to aggregate by weight. Overall, the sample has a fine-grained appearance, is white in color, and features a tooled joint profile. The brick mortar was mixed with an approximate ratio of 1:3 binder to aggregate by weight. Overall, the sample is large-grained in appearance, is orange-brown in color, and has a ruled joint profile commonly used on colonial revival buildings. It was discovered during the sample extraction process that the limestone bed mortar is similar in appearance to the brick pointing mortar indicating the white limestone mortar was used exclusively as a pointing mortar to blend the stones together.

MA01

1.  2. 

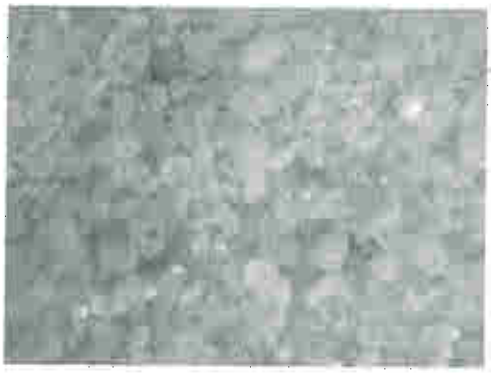
1.) Magnified image of mortar sample MA01 before acid digestion.
2.) Magnified image of the aggregate of the mortar after acid digestion.

The sample is taken from a 5/8" joint from limestone quoins. It does not break easily by hand and cleaves through the aggregate not the binder. The white binder is matte and smooth. The binder to aggregate ratio is heavy. Void volume is approximately 1% primarily in the form of oblong voids from entrapped air. Voids tend to be smaller than the medium aggregate. The color of the mortar is a grayish white (Munsell 10YR 9/2). Analysis indicates the ratio of binder to sand is approximately 1:1 by weight. The mortar is neutral with a pH of approximately 7.

The main portion of the sands are fairly uniform in composition and the overall color is a pale orange yellow (Munsell 10YR 8.5/1.5). Most of the grains are translucent but larger particles are opaque and vary in color from black, orange, to brick dust. The fines of the sample are light gray in color (Munsell 5Y 9/1).

MA02

1. 

2. 

1.) Magnified image of mortar sample MA02 before acid digestion.
2.) Magnified image of the aggregate of the mortar after acid digestion.

The sample is taken from a 1/2" brick joint from the rear elevation. The sample does not break easily by hand and cleaves through the binder not the aggregate. The light brown binder is matte and textured. The binder to aggregate ratio is moderate. Void volume is approximately 15% primarily in the form of rounded, regular voids from entrapped air. Voids tend to be larger than the medium aggregate and smaller than the larger aggregate. The color of the mortar is a pale orange yellow (Munsell 10YR 8.5/3.5). Analysis indicates the ratio of binder to sand is approximately 1:3 by weight. The mortar is neutral with a pH of approximately 7.

The main portion of the aggregate is not uniform in composition and has an aggregate size very close to the ASTM standard for mortar. Most of the grains are opaque or translucent and vary in color from orange, to gray, to red. Overall, the color of the aggregate is a light orange brown (Munsell 10YR 7.5/4) The fines of the sample are pale orange yellow in color (Munsell 10YR 8.5/3.5).

IV. RECOMMENDATIONS

The chemical analysis indicates that both samples were fabricated with a cement-based binder and a light orange aggregate. The aggregate for the limestone pointing mortar was much finer than the brick aggregate most likely to match the grain of the stone. Cement/lime mortars were common in twentieth century architecture. For both the limestone and the brick, JMA recommends using a Type-N cement-lime mortar with a compression strength no stronger than 760 psi (as cured after one year) to minimize compression rate differences between the existing cement mortar that will remain in the wall, the new pointing mortar, and the masonry. The binder should be mixed with a well graded local aggregate that imparts a color to the mortar that is similar to what is existing in the wall. The aggregate should meet the ASTM Standard C144 for allowable particle size distribution in mortar aggregates as seen in the chart below:

Sieve Size	Percent Passing Maximum Allowable	Minimum Allowable	Median
10	100%	95%	98%
16	100%	70%	85%
35	75%	40%	58%
50	40%	10%	25%
100	25%	2%	14%
200	10%	0%	5%

Replication

JMA recommends a Type N cement-lime mortar using Portland Cement (gray or white depending on color-match), natural hydraulic lime, and matched aggregate. Natural hydraulic limes have become available in the US and should be considered for building conservation work. Hydraulic lime mortars are more vapor permeable than pure cement mortars, which aids water and salt removal within the masonry, and have better elasticity, allowing for building movement without cracking. Hydraulic limes do require treatment after placement to ensure proper curing, which is vital for frost resistance. The choice of a contractor with experience using hydraulic limes is the key to a successful project.

The replacement mortar must have good flexural strength, high permeability, and must exhibit a lower compressive strength than the existing masonry. Mock-ups of mortar mixes are required to determine the exact mortar recipe and products that will match the historic mortar. JMA will retain samples of the digested aggregate should you require a replication mix in the future.

Mortar Performance Characteristics

- Replacement mortar should match the physical properties of the existing mortar. Ideally the composition of the new mortar should duplicate that of the original. Current techniques can provide subjective data on properties of the mortar such as hardness, air content, and color; most also free the sand for matching. Actual values for weight percentages of sand and carbonate (through collection of carbon dioxide gas with the digestion of the mortar) can also be determined. Unfortunately, current analysis techniques such as the Cliver and Jedrzejewska methods cannot accurately determine the actual original mix; there are far too many variables.[2]
- Replacement mortar is intended to be sacrificial because it is easily replaced. Mortar should, therefore, be softer than the existing masonry, which is less durable than new stone because of weathering and other treatments.
- Replacement mortar must be more porous than the surrounding masonry it supports, thus allowing moisture that may enter a wall to pass through it to the exterior. Hard, dense mortars prevent this moisture movement, causing accelerated deterioration in the masonry unit rather than in the mortar joint.

[2] See Hanna Jedrzejewska, "Old mortars in Poland: a new method of investigation" in *Studies in Conservation*, V. 5, n. 4 (1960): 132-138.

Mortar Sample Preparation

- Prepare a range of samples to determine the appropriate materials and proportions for the new mortar. Small batches of sample mortars can be prepared off-site until a preliminary mix is developed.
- Final samples should be prepared on site at actual repair locations to determine application method and final tooling, and to establish a performance standard.
- **Final selection of the replacement mortar mix to be used is the responsibility of the owner or architect of record, and should be based on evaluation of the cause of failure of the existing mortar, and the condition and type of the masonry.**

Good Repointing Practice

- Repoint all open mortar joints in masonry walls. Leaving joints open will lead to moisture penetration and may, in turn, lead to material degradation of internal structural components.
- Friable, cracked, disintegrated joints must be cut back to sound mortar before repointing.
- Rake out existing deteriorated mortar to a depth of ¾-inch to 1-inch beyond the face of the joint.
- Install new mortar tooled to match the profile of the original mortar joints.
- Pack all voids in bedding mortar with new mortar, and then repointed to prevent face loading of the masonry and consequent spalling (face loading also occurs when pointing mortar is much harder than the bedding mortar).
- Do not install mortar during temperatures below 45°F or above 85°F.
- Properly cure new mortar to ensure that it does not dry out too quickly using a combination of protection and water misting as required. Failure to properly cure the mortar may lead to premature failure of the new work.

APPENDIX I: MORTAR ANALYSIS SUMMARY SHEETS

MORTAR ANALYSIS SUMMARY SHEET

Project Name: PetworthMA

Location:Limestone Quoin Pointing Mortar

Sample No.: MA01

Date: 05-09-08

Chemical Analysis

A. CALCULATIONS (weight in g.)

1. Container Weight:	159.55
2. Sample Weight	10.35
3. Filter Paper Weight	2.26
4. Container + Sand Weight:	163.02
5. Sand Weight:	3.47
6. Paper + Fines Weight:	3.74
7. Fines Weight:	1.48
8. Sand + Fines Weight:	4.95
9. Acid Soluble Weight	5.40
10. Weight Percent Sand	33.53%
11. Weight Percent Acid Soluble	52.17%
12. Weight Percent Fines	14.30%

B. PRE-TEST - Sample
Description: The sample is taken from a 5/8" joint from limestone quoins. The pointing mortar and the bedding mortar of the limestone blocks were not the same composition. The bedding mortar is similar to the mortar used for the brickwork. The processed sample only included the pointing mortar. The sample does not break easily by hand with cleavage through the aggregate not the binder. The white binder is matte and textured. The binder to aggregate ratio is heavy. Void volume is approximately 1% primarily in the form of oblong voids from entrapped air. Voids tend to be smaller than the medium aggregate.

Color Munsell Value: Munsell: 10YR 9/2 Color Name: White

Relative Hardness: soft 1 2 3 4 5 6 7 8 9 **10** hard

C. POST-TEST - Sands

Color Munsell Value: Munsell: 10YR 8.5/1.5 Color Name: Pale Orange Yellow

Opacity: Opaque: 15% Translucent: 60% Transparent: 25%

Angularity: The particles are mostly rounded measuring R0.7/S0.9.

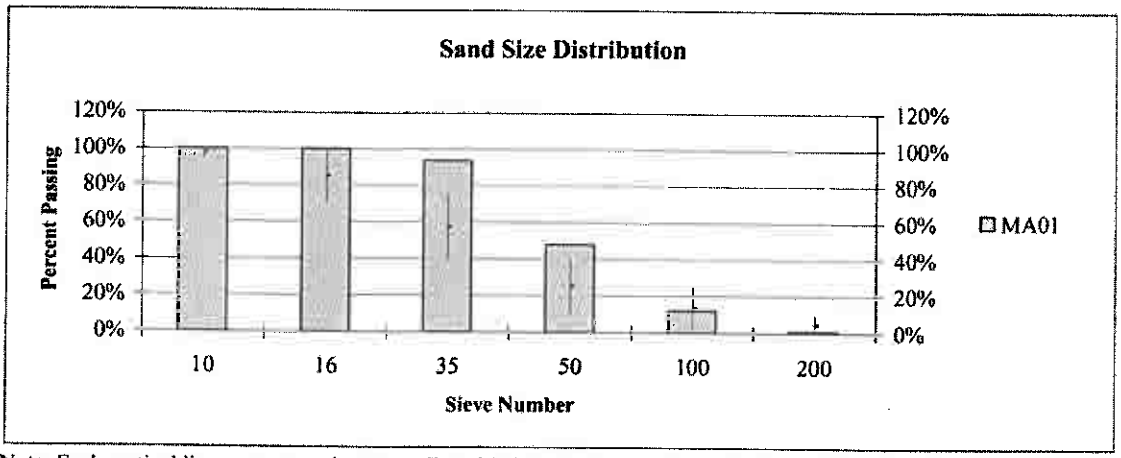
Composition: The main portion of the sands are fairly uniform in composition. Most of the grains are translucent or opaque ranging in color from red, to orange, to flecks of black. There are some brick dust particles but it does not appear that the brick dust was used for pigment or to impart any characteristics to the mortar.

Size:	Sieve No.	Weight	Percent Passing
	10	0.00 grams	100%
	16	0.00 grams	100%
	35	0.23 grams	93%
	50	1.58 grams	48%
	100	1.24 grams	12%
	200	0.38 grams	1%
	<200	0.03 grams	0%

D. POST-TEST - Fines

Color Munsell Value: Munsell: 5Y 9/1 Color Name: Light Gray

E. NOTES: There was high effervescence during acid digestion. The sample digested quickly with large bubbles but then it took a while to completely digest. The color of the acid solution changed to bright green during digestion indicating the presence of cement.



Note: Each vertical line represents the range allowable in a mortar sand for a given particle size as specified by ASTM C 144 Standard Specification for Aggregate for Masonry Mortar. Allowable percentages are different for natural and manufactured sands; this chart represents the absolute maximum and minimum of both aggregate types considered together. The bars represent the particle size distribution of the sample.

MORTAR ANALYSIS SUMMARY SHEET

Project Name: PETWORTHMA

Location:Brick Pointing Mortar

Sample No.: MA02

Date: 05-09-08

Chemical Analysis

A. CALCULATIONS (weight in g.)

1. Container Weight:	163.64
2. Sample Weight	21.08
3. Filter Paper Weight	2.24
4. Container + Sand Weight:	177.17
5. Sand Weight:	13.53
6. Paper + Fines Weight:	4.46
7. Fines Weight:	2.22
8. Sand + Fines Weight:	15.75
9. Acid Soluble Weight	5.33
10. Weight Percent Sand	64.18%
11. Weight Percent Acid Soluble	25.28%
12. Weight Percent Fines	10.53%

B. PRE-TEST - Sample
Description: The sample is taken from a 1/2" brick joint from the rear elevation. The sample does not break easily by hand with cleavage through the binder not the aggregate. The light brown binder is matte and textured. The binder to aggregate ratio is moderate. Void volume is approximately 15% primarily in the form of rounded, regular voids from entrapped air. Voids tend to be larger than the medium aggregate and smaller than the larger aggregate.

Color Munsell Value: Munsell: 10YR 8.5/3.5 Color Name: Pale Orange Yellow

Relative Hardness: soft 1 2 3 4 5 6 7 **8** 9 10 hard

C. POST-TEST - Sands

Color Munsell Value: Munsell: 10YR 7.5/4 Color Name: Light Orange Brown

Opacity: Opaque: 50% Translucent: 40% Transparent: 10%

Angularity: The particles are mostly rounded measuring R0.7/S0.9.

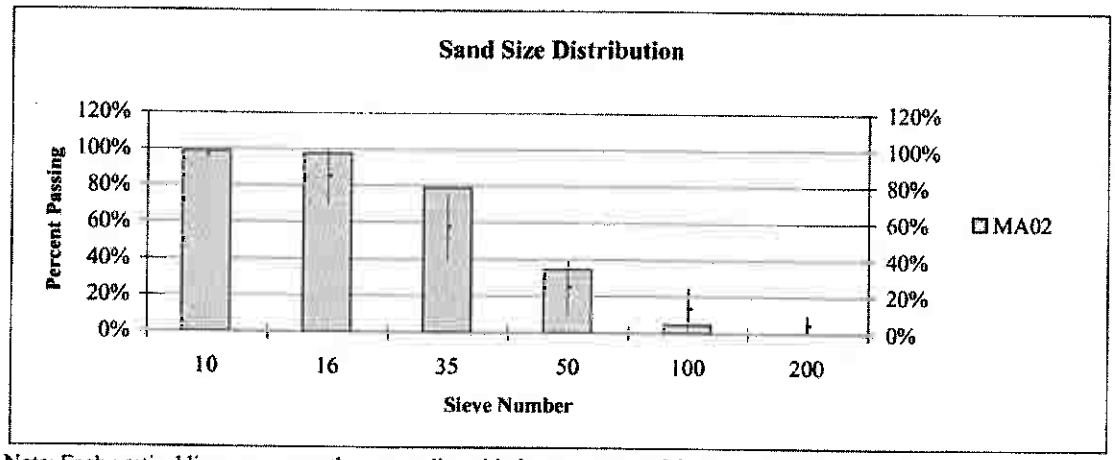
Composition: The main portion of the sands are fairly uniform in composition. Most of the grains are translucent and are light orange in color. Larger particles are opaque and vary in color from red, to gray, to brick dust.

Size:	Sieve No.	Weight	Percent Passing
	10	0.20 grams	99%
	16	0.18 grams	97%
	35	2.53 grams	79%
	50	6.04 grams	34%
	100	4.06 grams	5%
	200	0.62 grams	0%
	<200	0.01 grams	0%

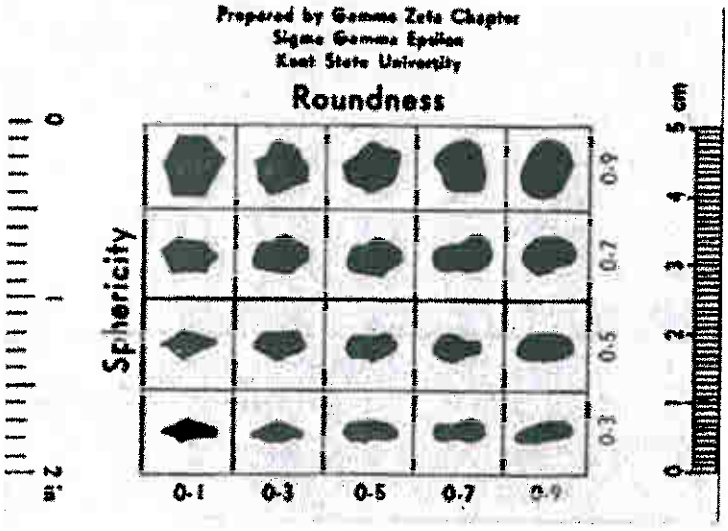
D. POST-TEST - Fines

Color Munsell Value: 10YR 8.5/3.5 Color Name: Pale Orange Yellow

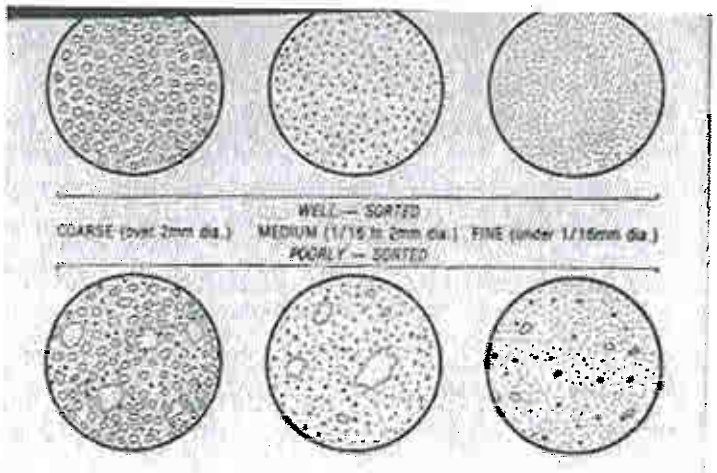
E. NOTES: There was high effervescence during acid digestion. The sample digested quickly with large bubbles but then it took a long time to completely digest.



Note: Each vertical line represents the range allowable in a mortar sand for a given particle size as specified by ASTM C 144 Standard Specification for Aggregate for Masonry Mortar. Allowable percentages are different for natural and manufactured sands; this chart represents the absolute maximum and minimum of both aggregate types considered together. The bars represent the particle size distribution of the sample.



ROUNDNESS SCALE



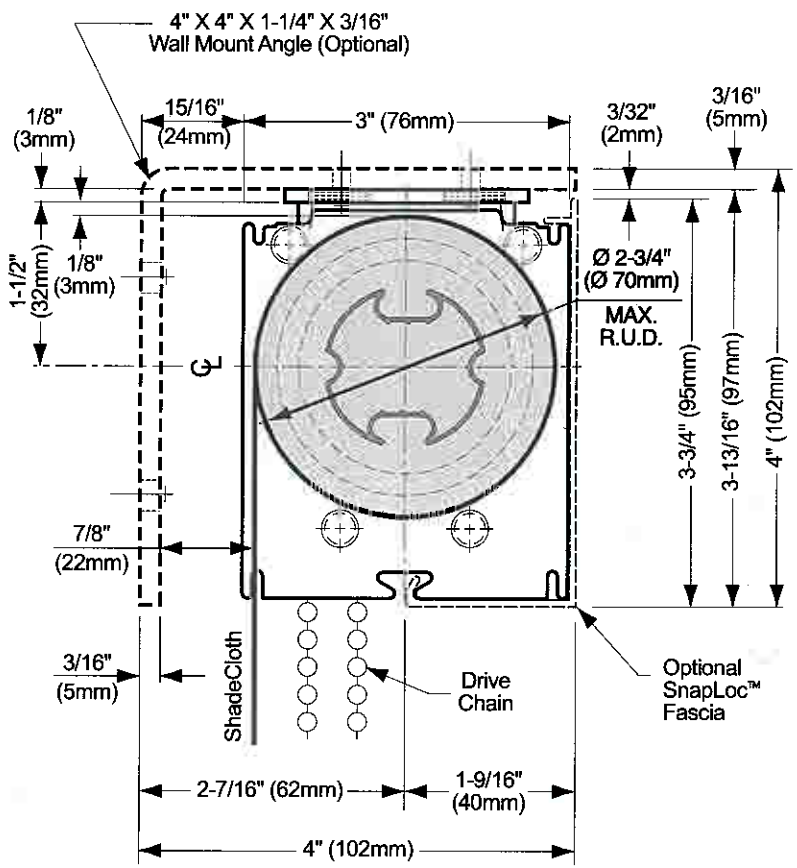
GRAIN SIZE AND SORTING

MechoShade®

Mecho®/5 Wide Bracket

with optional fascia

- Available with drive-end, idle-end and center support brackets
- Maximum roll up diameter with optional fascia: 2-3/4" (70mm)
- Wall or ceiling mounted
- Order with: ThermoVeil® SunScreens, EuroVeil® SunScreens, Blackout ShadeCloths or DualShades®
  - — (Blackout/Sunscreens combo)
  - — (MirroFilm/SunScreens combo)
- Available with optional Blackout Channel, Fascia and End Caps.
- See maximum shade height chart.
- DoubleShade Brackets available for sunscreen & blackout on one compact bracket.



Attachment J.14
Amendment No. 2
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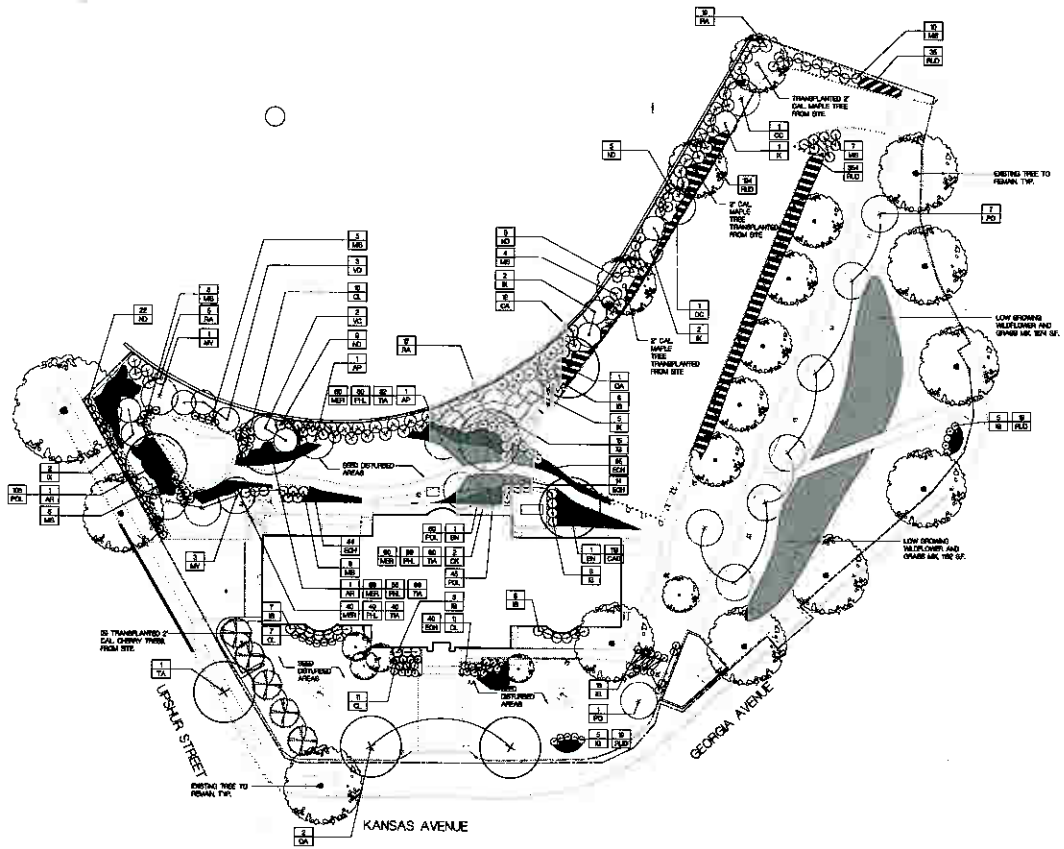

KEY

- PERENNIAL GROUND COVER
- PROPOSED ORNAMENTAL TREES
- EXISTING CANOPY TREES TO REMAIN
- EXISTING MAPLE TREES TO BE TRANSPLANTED ONSITE
- EXISTING CHERRY TO BE TRANSPLANTED ONSITE
- PROPOSED SHRUBS
- PROPOSED CANOPY TREE
- FLAGPOLE WITH LIGHT BEACON
- PATHWAY LIGHT (BOLLARD)
- RECESSED WALL LIGHT
- HANDRAIL
- WALL MOUNTED SECURITY LIGHT
- TREE UPLIGHT
- WALL MOUNTED LIGHT

1 PLANTING PLAN
L2.1 1" = 20'-0"

GENERAL NOTES

1. PROVIDE QUANTITIES SHOWN ON PLAN.
2. ALL NEW PLANT MATERIAL SHALL CONFORM TO THE MINIMUM GUIDELINES ESTABLISHED FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. IN ADDITION, ALL NEW PLANT MATERIAL FOR THE PROJECT SHALL BE OF SPECIMEN QUALITY.
3. THE CONTRACTOR SHALL SUPPLY ALL NEW PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE DRAWINGS.
4. CONTRACTOR SHALL LOCATE AND VERIFY ALL EXISTING UTILITY LINES PRIOR TO PLANTING AND SHALL REPORT ANY CONFLICTS TO THE LANDSCAPE ARCHITECT.
5. STAKE LOCATION OF ALL PROPOSED PLANTING FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO THE COMMENCEMENT OF PLANTING.
6. COORDINATE WITH CIVIL DRAWINGS AND LOCATE THE CONTINUOUS PLANTING BED DRAINAGE THROUGHOUT THE SITE.
7. COORDINATE WITH ALL DISCIPLINES BEFORE INSTALLING PLANT MATERIAL.

1/20"=1'-0"

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PLANTING PLAN

- DATE -
November 10, 2008
- SCALE -
AS NOTED
- SHEET NUMBER -
L 2.1
- ISSUE -
BID SET

Attachment J.15
Amendment No. 2
DCPL-2009-I-0003

PLANT SCHEDULE

TREES					
SYMBOL	BOTANICAL NAME	COMMON NAME	PROP. QUANTITY	HIGHT/SIZE	NOTES
AR	Acer rubrum 'Autumn Flame'	Red maple 'Autumn Flame'	2	2" CAL.	B&B
AP	Acer palmatum	Japanese maple	2	2" CAL.	B&B
BN	Betula nigra	River birch	2	2" CAL.	B&B
CC	Cercis canadensis	Redbud	2	5- 6'	B&B
CK	Cornus kousa	Kousa Bogwood	2	5- 6'	B&B
IX	Ilex x 'Nellie R Stevens'	Holly Nellie R Stevens	12	5- 6'	B&B
MV	Magnolia virginiana	Southbay Magnolia	4	2" CAL	B&B
PD	Prunus okane	Cherry	8	2" CAL	B&B
QA	Quercus alba	White Oak	3	2" CAL	B&B
TA	Tilia americana	American linden	1	2" CAL.	B&B
SHRUBS					
CL	Clethra alnifolia 'Hummingbird'	Summersweet 'Hummingbird'	39	18-24"	container
CA	Callcarpa americana	American beautyberry	12	18-24"	container
IG	Ilex glabra 'Shamrock'	Inkberry	68	18-24"	container
ND	Nandina domestica 'Gulf Stream'	Nandina	45	1 gallon	container
RA	Rhus armonatica 'Grow-low'	Fragrant Sumac	41	1 gallon	container
VC	Viburnum carlesii	Korean spice viburnun	2	18-24"	container
VD	Viburnun dentatum	Southern Arrowwood	3	18-24"	container
GROUND COVER					
SYMBOL	BOTANICAL NAME	COMMON NAME	PROP. QUANTITY	HIGHT/SIZE	NOTES
CAG	Carex glauca	Heath sedge	110	1 gallon container	18" o.c
MER	Mertensia virginica	Virginia bluebells	243	1 gallon container	12" o.c.
MIS	Miscanthus sinensis 'Gracillinus'	Miscanthus grass	50	1 gallon container	2' o.c
PHL	Phlox divaricata	Wild phlox	243	1 gallon container	12" o.c.
POL	Polystichum acrostichoides	Christmas Fern	233	1 gallon container	18" o.c
RUD	Rudbeckia fulgida var. sullivantii 'Goldsturm'	Black eyed Susan	621	1 gallon container	18" o.c
TIA	Tiarella cordifolia	Foamflower	245	1 gallon container	12" o.c.
ECH	Echinacea purpurea	Purple coneflower	163	1 gallon container	18" o.c
SEED MIX					
ERNMX-156	ERNST Low Growing WildFlower and Grass Mix	2406 sf @ .75 lbs/1000sf	2 lbs		Seed

Attachment J.16
Amendment No. 2
DCPL-2009-I-0003

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PLANT SCHEDULE

- DATE -
November 10, 2008

- SCALE -
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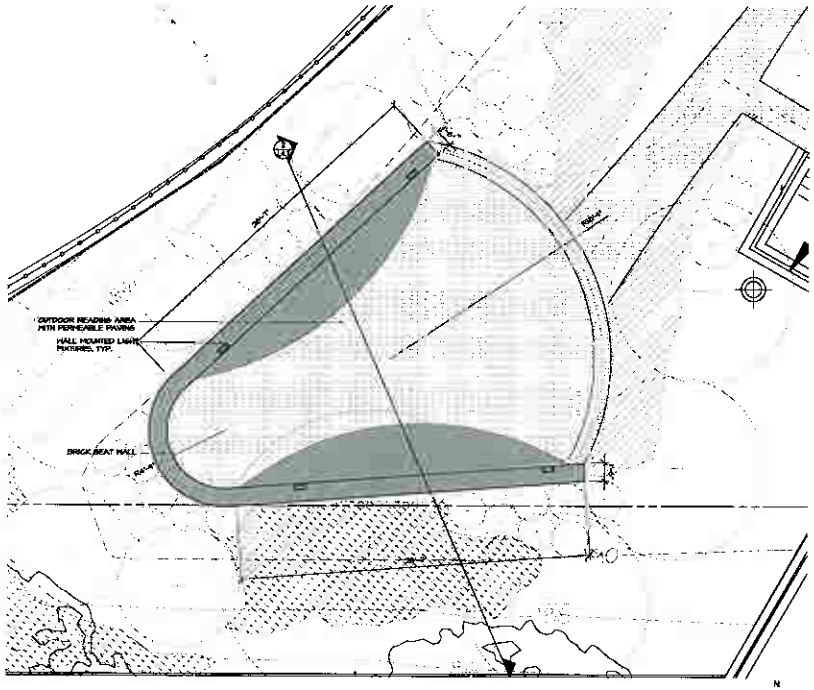
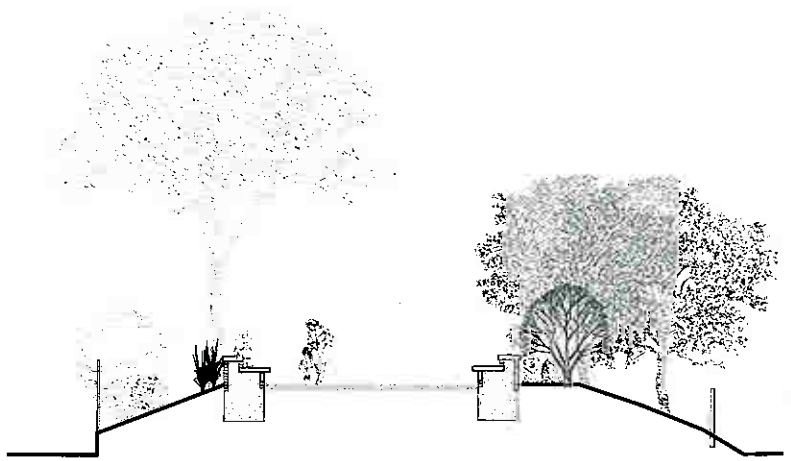
- SHEET NUMBER -
L 2.2

- ISSUE -
BID SET



1 / L4.2 READING ROOM SEAT WALL DETAIL
1/4" = 1'-0"



2 / L4.2 READING ROOM SECTION
1/4" = 1'-0"

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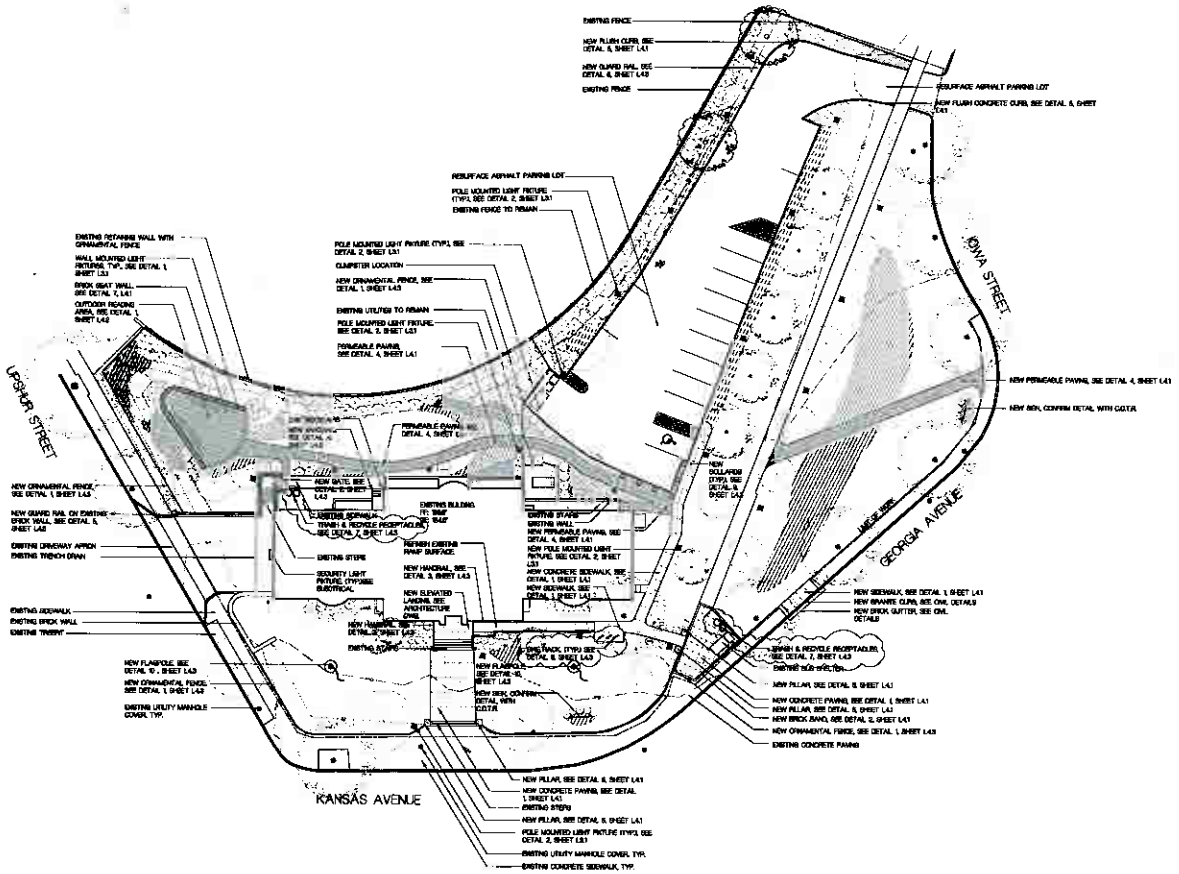
READING ROOM DETAIL

Attachment J.17
Amendment No. 2
DCPL-2009-I-0003

- DATE -
November 10, 2009
- SCALE -
NOT TO SCALE
- SHEET NUMBER -
L4.2
- ISSUE -
BID SET



1 SITE PLAN
L4.1 1" = 20'-0"

GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR EXISTING CONDITIONS AND FOR LOCATING ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION ON SITE. ALL BUILDINGS, FEATURES, UTILITIES, AND SURVEYS TO REMAIN, INCLUDING BUT NOT LIMITED TO EXISTING WATER METERS, HOUSINGS, VALVE BOXES, MANHOLES, FRAMES, COVERS, AND GRATINGS SHALL BE PROTECTED IN PLACE. REFER TO CIVIL PLANS FOR ADJUSTMENTS AND/OR REMOVAL. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY COST INCURRED DUE TO DAMAGE OF SAID FEATURES.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTENCE OF VAULTS AND BASEMENTS EXTENDING BEYOND THE BUILDING LINE. ALL EXISTING VAULTS AND BASEMENT SHALL BE PROTECTED IN PLACE. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY COST INCURRED DUE TO DAMAGE OF SAID FEATURES.

3. WHERE NEW CONCRETE PAVING IS TO BE PLACED AGAINST EXISTING CONSTRUCTION, SUCH AS BUILDINGS, PAVING, FOOTINGS, STAIRS, MANHOLES AND SIMILAR IMPROVEMENTS, A HALF INCH EXPANSION JOINT SHALL BE PROVIDED.

4. ALL DIMENSIONS ARE FROM POINT OF BEGINNING AND CENTERLINE UNLESS OTHERWISE SHOWN ON THE DRAWINGS.

5. CONSULT WITH LANDSCAPE ARCHITECT, ALL DRAWINGS, AND SPECIFICATIONS PRIOR TO BEGINNING CONSTRUCTION REQUIREMENTS AND REFER TO THEM AT CONSTRUCTION

6. PLACE EXPANSION JOINTS FOR CONCRETE SUB BASE EVERY 20'-0" +/- O/C. PLACE CONTROL JOINTS EVERY 5'-0" O/C. EXPANSION JOINTS TO BE INSTALLED PER DETAILS.

7. LIGHT LINE REPRESENTS LIMIT OF WORK FOR SIDEWALK AND LANDSCAPE WORK. REFER TO CIVIL AND LIGHTING DRAWINGS FOR FULL EXTENTS PROJECT.

8. ANY ALTERATIONS TO THESE DRAWINGS MADE IN THE FIELD DURING CONSTRUCTION SHALL BE PROMPTLY REPORTED BY THE CONTRACTOR TO THE LANDSCAPE ARCHITECT AND RECORDED BY "AS-BUILT" DRAWINGS.

9. THE CONTRACTOR SHALL TAKE PROPER PRECAUTIONS SO NOT TO DAMAGE EXISTING ADJACENT FACILITIES AND STRUCTURES. THE CONTRACTOR SHALL RESTORE DISTURBED AREAS TO THEIR ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE NOTED.

10. CONTRACTOR IS RESPONSIBLE FOR BECOMING FAMILIAR WITH ALL PLANS FOR UTILITY IMPROVEMENTS.

11. SEE CIVIL SHEETS FOR FINAL GRADING

12. FINISH GRADES OF ALL CONCRETE SURFACES TO MEET FLUSH WITH EXISTING CONCRETE GRADES.

0 10 20 40 FT
1/20"=1'-0"

Attachment J.18
Amendment No. 2
DCPL-2009-I-0003

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SITE PLAN

- DATE -
November 10, 2008
- SCALE -
1" = 20'-0"
- SHEET NUMBER -
L1.1
- ISSUE -
DED SET

PRICE BREAK DOWN FORM

The offeror must complete this breakdown of prices and submit it with its offer. In case of any discrepancy in the total bid price entered here and under Section-B.4, the latter shall govern. The offeror shall balance the divisional prices entered below (without any frontloading). These prices are for the sole use of predetermining activity costs during the pre-construction phase; but after the award, and for later use in computing monthly progress payments, are subject to final approval by the COTR before the actual work starts.

B.5 Breakdown into Divisions of lump sum price bid under CLIN # 01, Section-B.4

DIVISION NO. *	DESCRIPTION	TOTAL PRICE BREAKDOWN
Div. 01	General Requirements	.....
Div. 02	Existing Conditions	.....
Div. 03	Concrete	.....
Div. 04	Masonry	.....
Div. 05	Metals	.....
Div. 06	Wood & Plastics	.....
Div. 07	Thermal & Moisture Protection	.....
Div. 08	Doors & Windows	.....
Div. 09	Finishes	.....
Div. 10	Specialties	.....
Div. 12	Furnishings	.....
Div. 13	Special Construction	.....
Div. 14	Conveying Systems	.....
Div. 15	Mechanical	.....
Div. 16	Electrical	.....

Lump Sum Bid Price	Lump Sum Bid Price (copy from CLIN # 001, Section-B.4, Part-I of IFB)	.....

* DIVISION means a discrete component of the work for which a separate price is requested. The "Total Price Breakdown" is the sum total of all components, and must equal the Lump Sum Bid Price.